

Refine Search

Search Results -

| Terms | Documents |
|------------------|-----------|
| L9 and short.in. | 18 |

Database:

US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search:

L20

Refine Search

Recall Text

Clear

Interrupt

Search History

 DATE: Tuesday, May 10, 2005 [Printable Copy](#) [Create Case](#)

| <u>Set Name</u> <u>Query</u> | <u>Hit Count</u> | <u>Set Name</u> result set |
|---|------------------|-------------------------------|
| <i>DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i> | | |
| <u>L20</u> 19 and short.in. | 18 | <u>L20</u> |
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| <u>L19</u> 5284933.pn. | 1 | <u>L19</u> |
| <i>DB=EPAB; PLUR=YES; OP=OR</i> | | |
| <u>L18</u> WO-9908539-A1.did. | 0 | <u>L18</u> |
| <u>L17</u> WO-9908539-A1.did. | 0 | <u>L17</u> |
| <i>DB=DWPI; PLUR=YES; OP=OR</i> | | |
| <u>L16</u> 9908539 | 3 | <u>L16</u> |
| <i>DB=USPT; PLUR=YES; OP=OR</i> | | |
| <u>L15</u> (5366736 or 5436156 or 5593963 or 5939303 or 5287933 or 5830732 or 5863533 or 5900525 or 5989600 or 6022846 or 6139902 or 6221644 or 5824779 or 6248938).pn. | 14 | <u>L15</u> |
| <i>(5366736 or 5436156 or 5593963 or 5939303 or 5287933 or 5830732 or</i> | | |

| | | |
|--|-----|------------|
| <u>L14</u> 5863533 or 5900525 or 5989600 or 6022846 or 6139902).pn. <i>DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i> | 11 | <u>L14</u> |
| <u>L13</u> L12 and drink\$4 | 25 | <u>L13</u> |
| <u>L12</u> L11 and plant\$4 | 92 | <u>L12</u> |
| <u>L11</u> L10 and liquid\$4 | 101 | <u>L11</u> |
| <u>L10</u> L9 same (bacter\$4 or microb\$4) | 143 | <u>L10</u> |
| <u>L9</u> phytase\$4 same (food\$4 or feed\$4) <i>DB=PGPB,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i> | 541 | <u>L9</u> |
| <u>L8</u> 11 <i>DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i> | 0 | <u>L8</u> |
| <u>L7</u> 11 | 72 | <u>L7</u> |
| <u>L6</u> L5 and liquid.clm. | 5 | <u>L6</u> |
| <u>L5</u> 12 <i>DB=USPT; PLUR=YES; OP=OR</i> | 69 | <u>L5</u> |
| <u>L4</u> L3 and liquid.clm. | 3 | <u>L4</u> |
| <u>L3</u> L2 and (bacter\$4 or microb\$4).clm | 62 | <u>L3</u> |
| <u>L2</u> (phytase\$4 and (feed\$ or food\$4)).clm. not diversa.asn. | 69 | <u>L2</u> |
| <u>L1</u> (phytase\$4 and (feed\$ or food\$4)).clm. | 72 | <u>L1</u> |

END OF SEARCH HISTORY

=> d his

(FILE 'HOME' ENTERED AT 13:40:35 ON 10 MAY 2005)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, ...' ENTERED AT 13:45:34 ON 10 MAY 2005
SEA PHYTAS? (S)(FOOD? OR FEED?)

196 FILE AGRICOLA
7 FILE ANABSTR
9 FILE ANTE
2 FILE AQUALINE
35 FILE AQUASCI
109 FILE BIOBUSINESS
16 FILE BIOCOMMERCE
58 FILE BIOENG
421 FILE BIOSIS
265 FILE BIOTECHABS
265 FILE BIOTECHDS
66 FILE BIOTECHNO
812 FILE CABA
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875 FILE CAPLUS
43 FILE CEABA-VTB
3 FILE CEN
27 FILE CIN
3 FILE CONFSCI
1 FILE CROPU
1797 FILE DGENE
45 FILE DISSABS
2 FILE EMBAL
74 FILE EMBASE
151 FILE ESBIODASE
105* FILE FEDRIP
2 FILE FOMAD
2 FILE FOREGE
175 FILE FROSTI
115 FILE FSTA
11 FILE GENBANK
3 FILE HEALSAFE
117 FILE IFIPAT
54 FILE JICST-EPLUS
67 FILE LIFESCI
172 FILE MEDLINE
2 FILE NIOSHTIC
4 FILE NTIS
1 FILE NUTRACEUT
12 FILE OCEAN
196 FILE PASCAL
72 FILE PHIN
156 FILE PROMT
517 FILE SCISEARCH
138 FILE TOXCENTER
331 FILE USPATFULL
28 FILE USPAT2
2 FILE VETB
431 FILE VETU
5 FILE WATER
174 FILE WPIDS
1 FILE WPIFV
174 FILE WPINDEX
1 FILE IPA
58 FILE NLDB

L1 QUE PHYTAS? (S)(FOOD? OR FEED?)

FILE 'DGENE, CAPLUS, CABA, SCISEARCH, VETU, BIOSIS, USPATFULL, BIOTECHDS, AGRICOLA, PASCAL, FROSTI, WPIDS, MEDLINE' ENTERED AT 13:47:56 ON 10 MAY 2005

L2 6362 S PHYTAS? (S)(FOOD? OR FEED?)
L3 331 S PHYTAS? (S)(FOOD? OR FEED?)(S)(BACTER? OR PROKARYO?)
L4 142 S L3 AND PLANT?
L5 112 DUP REM L4 (30 DUPLICATES REMOVED)
SET NOTICE DISPLAY 1
SET AUHELP OFF
SET SMART OFF
SET MSTEPS OFF
SET EXPAND CONT
SET AUDIT OFF
DEL SEL Y

FILE 'CAPLUS' ENTERED AT 14:10:26 ON 10 MAY 2005
L6 1 S GB 1996-16957/PN,APPS

FILE 'INPADOC' ENTERED AT 14:10:28 ON 10 MAY 2005

FILE 'CAPLUS' ENTERED AT 14:10:30 ON 10 MAY 2005
L7 TRA L6 1- PN : 15 TERMS

FILE 'INPADOC' ENTERED AT 14:10:31 ON 10 MAY 2005
L8 13 SEA L7
L9 2 S L8 AND US/PC
SEL PN
L10 0 S L8 AND ZA/PC
L11 1 S L8 AND EP/PC AND EN/LA
SEL PN
L12 1 S L8 AND WO/PC AND EN/LA
SEL PN
L13 1 S L8 AND CA/PC AND EN/LA
SEL PN
SET NOTICE LOGIN DISPLAY

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal652dmr

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status
data from INPADO
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online
NEWS 17 APR 25 Patent searching, including current-awareness alerts (SDIs),
based on application date in CA/Caplus and USPATFULL/USPAT2
may be affected by a change in filing date for U.S.
applications.
NEWS 18 APR 28 Improved searching of U.S. Patent Classifications for
U.S. patent records in CA/Caplus

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:40:35 ON 10 MAY 2005

=> index bioscience medicine
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 1.68 | 1.68 |

FULL ESTIMATED COST

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS,
BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB,
CROPU, DDFB, DDFU, DGENE, DISSABS, ...' ENTERED AT 13:45:34 ON 10 MAY 2005

78 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> s phytas4 (s)(food? or feed?)
4 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s phytas? (s)(food? or feed?)

| | |
|-----|------------------|
| 196 | FILE AGRICOLA |
| 7 | FILE ANABSTR |
| 9 | FILE ANTE |
| 2 | FILE AQUALINE |
| 35 | FILE AQUASCI |
| 109 | FILE BIOBUSINESS |
| 16 | FILE BIOCOMMERCE |
| 58 | FILE BIOENG |
| 421 | FILE BIOSIS |
| 265 | FILE BIOTECHABS |
| 265 | FILE BIOTECHDS |
| 66 | FILE BIOTECHNO |
| 812 | FILE CABA |
| 1 | FILE CANCERLIT |
| 875 | FILE CAPLUS |
| 43 | FILE CEABA-VTB |
| 3 | FILE CEN |
| 27 | FILE CIN |
| 3 | FILE CONFSCI |
| 1 | FILE CROPU |

24 FILES SEARCHED...

| | |
|------|-----------------|
| 1797 | FILE DGENE |
| 45 | FILE DISSABS |
| 2 | FILE EMBAL |
| 74 | FILE EMBASE |
| 151 | FILE ESBIODBASE |
| 105* | FILE FEDRIP |
| 2 | FILE FOMAD |
| 2 | FILE FOREGE |
| 175 | FILE FROSTI |
| 115 | FILE FSTA |
| 11 | FILE GENBANK |
| 3 | FILE HEALSAFE |

41 FILES SEARCHED...

| | |
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| 117 | FILE IFIPAT |
| 54 | FILE JICST-EPLUS |
| 67 | FILE LIFESCI |
| 172 | FILE MEDLINE |
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| 1 | FILE NUTRACEUT |
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| 196 | FILE PASCAL |
| 72 | FILE PHIN |
| 156 | FILE PROMT |
| 517 | FILE SCISEARCH |
| 138 | FILE TOXCENTER |
| 331 | FILE USPATFULL |

68 FILES SEARCHED...

| | |
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| 28 | FILE USPAT2 |
| 2 | FILE VETB |
| 431 | FILE VETU |
| 5 | FILE WATER |
| 174 | FILE WPIDS |
| 1 | FILE WPIFV |
| 174 | FILE WPINDEX |
| 1 | FILE IPA |
| 58 | FILE NLDB |

55 FILES HAVE ONE OR MORE ANSWERS, 78 FILES SEARCHED IN STNINDEX

L1 QUE PHYTAS? (S) (FOOD? OR FEED?)

=> d rank

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| F2 | 875 | CAPLUS |
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| F42 | 3 | CEN |
| F43 | 3 | CONFSCI |
| F44 | 3 | HEALSAFE |
| F45 | 2 | AQUALINE |
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| F49 | 2 | NIOSHTIC |
| F50 | 2 | VETB |
| F51 | 1 | CANCERLIT |
| F52 | 1 | CROPU |
| F53 | 1 | NUTRACEUT |
| F54 | 1 | WPIFV |
| F55 | 1 | IPA |

=> file f1-f15

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.36

4.04

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FILE 'WPIDS' ENTERED AT 13:47:56 ON 10 MAY 2005
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FILE 'WPINDEX' ACCESS NOT AUTHORIZED

FILE 'MEDLINE' ENTERED AT 13:47:56 ON 10 MAY 2005

=> s phytas? (s)(food? or feed?)

12 FILES SEARCHED...

L2 6362 PHYTAS? (S)(FOOD? OR FEED?)

=> s phytas? (s)(food? or feed?)(s)(bacter? or prokaryo?)

8 FILES SEARCHED...

12 FILES SEARCHED...

L3 331 PHYTAS? (S)(FOOD? OR FEED?)(S)(BACTER? OR PROKARYO?)

=> s l3 and plant?

6 FILES SEARCHED...

L4 142 L3 AND PLANT?

=> dup rem l4

DUPLICATE IS NOT AVAILABLE IN 'DGENE'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

PROCESSING COMPLETED FOR L4

L5 112 DUP REM L4 (30 DUPLICATES REMOVED)

=> d ti l5 1-112

L5 ANSWER 1 OF 112 USPATFULL on STN

TI Phytase enzymes, nucleic acid sequences encoding phytase enzymes and vectors and host cells incorporating same

L5 ANSWER 2 OF 112 USPATFULL on STN

TI Phytase from Bacillus subtilis, gene encoding said phytase, method for its production and use

L5 ANSWER 3 OF 112 USPATFULL on STN

TI Reagents, methods and kit for detecting feed enzymes

L5 ANSWER 4 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN

TI Recombinant bacterial phytases and uses thereof.

L5 ANSWER 5 OF 112 USPATFULL on STN DUPLICATE 1

TI Recombinant phytases and methods of making and using them

L5 ANSWER 6 OF 112 USPATFULL on STN DUPLICATE 2

TI Phytase-containing foodstuffs and methods of making and using them

L5 ANSWER 7 OF 112 USPATFULL on STN

TI Feedstuffs for agricultural livestock rearing comprising sorbic acid and enzymes

L5 ANSWER 8 OF 112 USPATFULL on STN

TI Treatment for SMA disease

L5 ANSWER 9 OF 112 USPATFULL on STN

TI Novel bacterial phytases and method for producing same

L5 ANSWER 10 OF 112 USPATFULL on STN

TI Use of food and drink as a delivery system for phytase in humans

L5 ANSWER 11 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Novel antimicrobial polypeptide, useful for killing or inhibiting growth of microbial cells and as medicament, antimicrobial veterinarian or human therapeutic or prophylactic agent;
vector-mediated antiseptic gene transfer and expression in host cell for recombinant protein production and disease therapy

L5 ANSWER 12 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Antimicrobial polypeptide useful for preventing microbial contamination in cooling water systems, laundry rinse water, for preservation of foods, and as a disinfectant e.g. in treatment of acne and infections in the eye or mouth;
 involving vector-mediated gene transfer and expression in host cell for use in therapy

L5 ANSWER 13 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN
 TI Transgenic seeds expressing amylopullulanase and uses therefor.

L5 ANSWER 14 OF 112 CABA COPYRIGHT 2005 CABI on STN DUPLICATE 3
 TI Enhancing the thermal tolerance and gastric performance of a microbial phytase for use as a phosphate-mobilizing monogastric-feed supplement.

L5 ANSWER 15 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN
 TI Phytase activity of *Lactobacillus plantarum* strains from fufu-fermented cassava.

L5 ANSWER 16 OF 112 CABA COPYRIGHT 2005 CABI on STN DUPLICATE 4
 TI Production of two highly active bacterial phytases with broad pH optima in germinated transgenic rice seeds.

L5 ANSWER 17 OF 112 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 5
 TI Production studies and catalytic properties of phytases (myo-inositolhexakisphosphate phosphohydrolases): an overview

L5 ANSWER 18 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
 TI Production, expression and sequence of modified recombinant *Escherichia coli* phytase with enhanced thermostability and proteolytic resistance for use in foodstuffs

L5 ANSWER 19 OF 112 USPATFULL on STN
 TI Recombinant bacterial phytases and uses thereof

L5 ANSWER 20 OF 112 USPATFULL on STN
 TI Phytase active yeast

L5 ANSWER 21 OF 112 USPATFULL on STN
 TI Thermotolerant phytase for animal feed

L5 ANSWER 22 OF 112 USPATFULL on STN
 TI Phytase from *Bacillus subtilis*, gene encoding said phytase, method for its production and use

L5 ANSWER 23 OF 112 USPATFULL on STN
 TI Microbially expressed thermotolerant phytase for animal feed

L5 ANSWER 24 OF 112 USPATFULL on STN
 TI Multi component controlled release system for oral care, food products, nutraceutical, and beverages

L5 ANSWER 25 OF 112 USPATFULL on STN
 TI Recombinant phytases and uses thereof

L5 ANSWER 26 OF 112 USPATFULL on STN
 TI Phytate polynucleotides and methods of use

L5 ANSWER 27 OF 112 USPATFULL on STN
 TI Phosphatases with improved phytase activity

L5 ANSWER 28 OF 112 USPATFULL on STN

TI Recombinant bacterial phytases and uses thereof

L5 ANSWER 29 OF 112 USPATFULL on STN

TI Novel inositol polyphosphate kinase genes and uses thereof

L5 ANSWER 30 OF 112 USPATFULL on STN

TI Enzymes with improved phytase activity

L5 ANSWER 31 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Novel Plectasin polypeptide having antimicrobial activity, useful for e.g. killing or inhibiting microbial cell growth, for use as a medicament and as antimicrobial therapeutic or prophylactic agent; recombinant protein production for use in disease therapy and **plant** engineering

L5 ANSWER 32 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI New isolated or recombinant thermostable phosphatase polypeptide, useful for improving phosphate consumption in animals, for treating solid or liquid animal waste products, or for removing a phosphate group; recombinant alkaline phosphatase, phosphodiesterase and phytase production, bioinformatics, monoclonal antibody, transgenic **plant** and transgenic animal for gene therapy

L5 ANSWER 33 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI New polynucleotide encoding fungal phytase, useful as feed additive to improve phosphate assimilation, also new strain of *Penicillium*; recombinant enzyme production and purification for use as a feed-additive

L5 ANSWER 34 OF 112 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI Preparing a thermotolerant phytase for preparing animal feed or human food by expressing in a **plant** cell an expression cassette comprising a promoter operably linked to a nucleic acid molecule encoding a thermotolerant phytase.

L5 ANSWER 35 OF 112 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI New kit comprising at least one antigenic peptide sequence, useful for predicting binding of a specific antibody to at least one potential immunogen, e.g. an allergen, or a marker specific for cancer, or a bacterial or viral infection.

L5 ANSWER 36 OF 112 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Optimization of the extracellular production of a bacterial phytase with *Escherichia coli* by using different fed-batch fermentation strategies.

L5 ANSWER 37 OF 112 CABA COPYRIGHT 2005 CABI on STN

TI Thermo-acido-tolerant phytase production from a soil bacterium in a medium containing rice bran and soybean meal extract.

L5 ANSWER 38 OF 112 CABA COPYRIGHT 2005 CABI on STN DUPLICATE 7

TI Phytate degradation in soaked and fermented liquid feed - effect of diet, time of soaking, heat treatment, phytase activity, pH and temperature.

L5 ANSWER 39 OF 112 CABA COPYRIGHT 2005 CABI on STN

TI [Effects of Profitaza(R) addition on broilers performance fed with three corn hybrids].
Utjecaj dodavanja Profitaze(R) na proizvodna svojstva pilic[acute]a hranjenih sa tri hibrida kukuruza.

L5 ANSWER 40 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8

TI New phytases identified by sequence homology and their use in food processing to lower phytic acid content

L5 ANSWER 41 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
 TI Recombinant **bacterial phytases** and their use for
 degradation of **food phytates**.

L5 ANSWER 42 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI A new polynucleotide encoding **bacterial phytase**,
 useful as a **feed** additive for improving utilization of
 inorganic phosphate;
 vector-mediated gene transfer, expression in host cell and DNA probe
 for recombinant protein production and animal feedstuff manufacture

L5 ANSWER 43 OF 112 USPATFULL on STN
 TI Overexpression of phytase genes in yeast systems

L5 ANSWER 44 OF 112 USPATFULL on STN
 TI Enzyme-containing granules and process for the production thereof

L5 ANSWER 45 OF 112 USPATFULL on STN
 TI Sorbic acid product comprising probiotics as addition to feedstuffs in
 agricultural livestock rearing

L5 ANSWER 46 OF 112 USPATFULL on STN
 TI Polypeptides controlling phytate metabolism in **plants**

L5 ANSWER 47 OF 112 USPATFULL on STN
 TI OVEREXPRESSION OF PHYTASE GENES IN YEAST SYSTEMS

L5 ANSWER 48 OF 112 USPATFULL on STN
 TI Polypeptides controlling phytate metabolism in **plants**

L5 ANSWER 49 OF 112 USPATFULL on STN
 TI Polypeptides controlling phytate metabolism in **plants**

L5 ANSWER 50 OF 112 USPATFULL on STN
 TI Phytase having a low michaelis constant for phytic acid from monascus

L5 ANSWER 51 OF 112 USPATFULL on STN
 TI ENZYME GRANULATE FOR USE IN FOOD TECHNOLOGY

L5 ANSWER 52 OF 112 USPATFULL on STN
 TI Enzyme-containing granules and process for the production thereof

L5 ANSWER 53 OF 112 USPATFULL on STN
 TI Phytase having a low michaelis constant for phytic acid from monascus

L5 ANSWER 54 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Method for using phytase as an anti-fungal material, and anti-fungal
 composition comprising phytase;
 animal, **plant**, Bacillus sp., or Aspergillus sp. phytase for
 use as fungicide

L5 ANSWER 55 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN
 TI Stability of **plant** and microbial phytases.

L5 ANSWER 56 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 11
 TI Recombinant **bacterial phytases** and uses for improved
 nutritional value of phytate-containing **foodstuffs**

L5 ANSWER 57 OF 112 USPATFULL on STN DUPLICATE 12
 TI Recombinant bacterial phytases and uses thereof

L5 ANSWER 58 OF 112 USPATFULL on STN
 TI Recombinant bacterial phytases and uses thereof

L5 ANSWER 59 OF 112 USPATFULL on STN
 TI Soybean phytase and nucleic acid encoding the same

L5 ANSWER 60 OF 112 USPATFULL on STN
 TI Genes controlling phytate metabolism in **plants** and uses thereof

L5 ANSWER 61 OF 112 USPATFULL on STN
 TI Process for converting phytate into inorganic phosphate

L5 ANSWER 62 OF 112 USPATFULL on STN
 TI Yeast cells comprising at least two copies of a desired gene integrated into the chromosomal genome at more than one non-ribosomal RNA encoding domain, particularly with Kluyveromyces

L5 ANSWER 63 OF 112 USPATFULL on STN
 TI Phytase having a low michaelis constant for phytic acid from monascus

L5 ANSWER 64 OF 112 USPATFULL on STN
 TI DS11 (KCTC 0231BP), novel Bacillus sp. strain and novel phytase produced by it

L5 ANSWER 65 OF 112 USPATFULL on STN
 TI Phytase-producing bacteria, phytase and production method of phytase

L5 ANSWER 66 OF 112 USPATFULL on STN
 TI Enzyme pre-granules for granular fodder

L5 ANSWER 67 OF 112 USPATFULL on STN
 TI Genes controlling phytate metabolism in **plants** and uses thereof

L5 ANSWER 68 OF 112 USPATFULL on STN
 TI Phytase

L5 ANSWER 69 OF 112 USPATFULL on STN
 TI Phytase-producing bacteria, phytase and production method of phytase

L5 ANSWER 70 OF 112 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Producing recombinant protein in Gram-negative cells, especially for producing enzymes, comprises using a gene controlled by a Gram-positive promoter and permeabilized cells.

L5 ANSWER 71 OF 112 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Novel bacterial galactanase enzymes, useful for textile, detergent and cellulose fiber processing industries, as well as for modifying and/or improving the nutritional value of animal feed.

L5 ANSWER 72 OF 112 CABA COPYRIGHT 2005 CABI on STN DUPLICATE 13
 TI Biotechnological development of effective phytases for mineral nutrition and environmental protection.

L5 ANSWER 73 OF 112 CABA COPYRIGHT 2005 CABI on STN
 TI [Fermented rye bran - an interesting ingredient and an example for a significant technology
 Nachhaltige Tierproduktion].
 Fermentierte Roggenkleie - ein interessanter Rohstoff und Beispiel für eine interessante Technologie.

L5 ANSWER 74 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 14
 TI Lactobacillus **plantarum** phytase activity is due to non-specific acid phosphatase

L5 ANSWER 75 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN

TI Fermented foods and their production.

L5 ANSWER 76 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
 TI Recombinant **bacterial phytases** and their uses for improving nutritional value of phytate-containing **feed**

L5 ANSWER 77 OF 112 USPATFULL on STN
 TI Enzyme-containing granules and process for the production thereof

L5 ANSWER 78 OF 112 USPATFULL on STN
 TI Phytase

L5 ANSWER 79 OF 112 USPATFULL on STN
 TI Quick-fermented feed and method of preparing

L5 ANSWER 80 OF 112 USPATFULL on STN
 TI Phytase-producing bacteria

L5 ANSWER 81 OF 112 USPATFULL on STN
 TI Method for improving the solubility of vegetable proteins

L5 ANSWER 82 OF 112 USPATFULL on STN
 TI DNA sequences encoding phytases of ruminal microorganisms

L5 ANSWER 83 OF 112 USPATFULL on STN
 TI Phytases of ruminal microorganisms

L5 ANSWER 84 OF 112 USPATFULL on STN
 TI Phytase

L5 ANSWER 85 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Phytase from *Bacillus subtilis*, its gene sequence and cloning, method for its production and use in food and feed processing

L5 ANSWER 86 OF 112 USPATFULL on STN
 TI Recombinant cells that express phytate degrading enzymes in desired ratios

L5 ANSWER 87 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI New soybean phytase;
 produced by fermentation or in transgenic **plant**

L5 ANSWER 88 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI *Bacillus subtilis* recombinant phytase purification and characterization; for use as food-additive or feed-additive

L5 ANSWER 89 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI New 3,6-phytase from *Thermomyces lanuginosus* and related DNA, vectors and transformed cells;
 vector plasmid expression in host cell for application in the food industry

L5 ANSWER 90 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Nutritive composition from corn steep liquor and method for obtaining it

L5 ANSWER 91 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Phytase;
 enzyme purification, characterization, immobilization and application as a feed-additive; a review

L5 ANSWER 92 OF 112 CABA COPYRIGHT 2005 CABI on STN
 TI [Federal Research Institute for Nutrition, Karlsruhe: Annual Report 1995]. Bundesforschungsanstalt für Ernährung, Karlsruhe: Jahresbericht 1995.

L5 ANSWER 93 OF 112 VETU COPYRIGHT 2005 THE THOMSON CORP on STN
TI Biotechnology in animal and feed production, in relation to human health and nutrition.

L5 ANSWER 94 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Biotechnology closes natural product cycles;
e.g. lysine, phytase or ethanol production and waste-disposal

L5 ANSWER 95 OF 112 VETU COPYRIGHT 2005 THE THOMSON CORP on STN
TI In feed enzymes and antibodies.

L5 ANSWER 96 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Production of phytase in transgenic **plant** or **plant** organ;
gene cloning and tissue-specific gene expression; use in inositol and inositol phosphate preparation, as a feed-additive and in soybean, starch, maize and sorghum processing; DNA sequence

L5 ANSWER 97 OF 112 CABA COPYRIGHT 2005 CABI on STN
TI By-product improvement through biotechnology in the starch industry.

L5 ANSWER 98 OF 112 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI BYPRODUCT IMPROVEMENT THROUGH BIOTECHNOLOGY IN THE STARCH INDUSTRY.

L5 ANSWER 99 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Biotechnology and improvement of animal nutrition;
microorganism, enzyme application in e.g. feedstuff modification, feed-additive production, improved digestion in farm animal (conference paper)

L5 ANSWER 100 OF 112 CABA COPYRIGHT 2005 CABI on STN
TI [Intestinal hydrolysis of inositol phosphoric acid ester and absorption of phytin phosphorus in pigs. 1. Experimental and analytical methods].
Untersuchungen zur intestinalen Hydrolyse von Inositphosphorsaureester und zur Absorption von Phytinphosphor beim Schwein. 1. Problemstellung der Untersuchungen und analytische Methodik.

L5 ANSWER 101 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI New **bacterial phytase** for e.g. improving the nutritional value of phytate-containing **foodstuffs** and subsequently improving the growth performance of an organism that consumes it, or in treating animal digestive systems -

L5 ANSWER 102 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI New **bacterial phytase** for e.g. improving the nutritional value of phytate-containing **foodstuffs** and subsequently improving the growth performance of an organism that consumes it, or in treating animal digestive systems -

L5 ANSWER 103 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI New **bacterial phytase** for e.g. improving the nutritional value of phytate-containing **foodstuffs** and subsequently improving the growth performance of an organism that consumes it, or in treating animal digestive systems -

L5 ANSWER 104 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI Method for **plant** gene engineering manipulations with biological safety based on specific construct to cause detectable changes in transformed **plant** trait, applicable for producing improved breeds of **plants**.

L5 ANSWER 105 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI New **bacterial phytase** for e.g. improving the

nutritional value of phytate-containing **foodstuffs** and subsequently improving the growth performance of an organism that consumes it, or in treating animal digestive systems -

L5 ANSWER 106 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI New **bacterial phytase** for e.g. improving the nutritional value of phytate-containing **foodstuffs** and subsequently improving the growth performance of an organism that consumes it, or in treating animal digestive systems -

L5 ANSWER 107 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI New **bacterial phytase** for e.g. improving the nutritional value of phytate-containing **foodstuffs** and subsequently improving the growth performance of an organism that consumes it, or in treating animal digestive systems -

L5 ANSWER 108 OF 112 DGENE COPYRIGHT 2005 The Thomson Corp on STN
TI New **bacterial phytase** for e.g. improving the nutritional value of phytate-containing **foodstuffs** and subsequently improving the growth performance of an organism that consumes it, or in treating animal digestive systems -

L5 ANSWER 109 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN
TI Protein production in transgenic **plant** seeds.

L5 ANSWER 110 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN
TI Thermotolerant phytase for animal feed.

L5 ANSWER 111 OF 112 VETU COPYRIGHT 2005 THE THOMSON CORP on STN
TI Feeding strategies for safe livestock production.

L5 ANSWER 112 OF 112 VETU COPYRIGHT 2005 THE THOMSON CORP on STN
TI Key areas of research at the Institute for Animal Nutrition, Berlin.

=> d ibib abs 15 2 6 7 9 10 15 18 22 24 30 34 38 37 41 42 49 56 76 88 96 101 110 111

L5 ANSWER 2 OF 112 USPATFULL on STN
ACCESSION NUMBER: 2005:30837 USPATFULL
TITLE: Phytase from Bacillus subtilis, gene encoding said phytase, method for its production and use
INVENTOR(S): Apajalahti, Juha, Kantvik, FINLAND
Heikkinen, Pekka, Kantvik, FINLAND
Kerovuo, Janne, Kantvik, FINLAND
Lauraeus, Marko, Kantvik, FINLAND
Morgan, Andrew, Marlborough, UNITED KINGDOM
Nurminen, Paivi, Kantvik, FINLAND
Siikanen, Osmo, Kantvik, FINLAND
PATENT ASSIGNEE(S): Finnfeeds International Ltd. (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2005026268 | A1 | 20050203 |
| APPLICATION INFO.: | US 2003-669781 | A1 | 20030924 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2002-251503, filed on 20 Sep 2002, GRANTED, Pat. No. US 6638746 | | |

| | NUMBER | DATE |
|-----------------------|---|----------|
| PRIORITY INFORMATION: | GB 1996-16957 | 19960813 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | FITCH EVEN TABIN AND FLANNERY, 120 SOUTH LA SALLE STREET, SUITE 1600, CHICAGO, IL, 60603-3406 | |

NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 969

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to phytase, nucleic acids encoding phytase as well as methods for the production of phytase and its use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 112 USPATFULL on STN DUPLICATE 2
ACCESSION NUMBER: 2004:90585 USPATFULL
TITLE: Phytase-containing foodstuffs and methods of making and using them
INVENTOR(S): Short, Jay M., Rancho Santa Fe, CA, United States
Kretz, Keith A., San Marcos, CA, United States
PATENT ASSIGNEE(S): Diversa Corporation, San Diego, CA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6720014 | B1 | 20040413 |
| APPLICATION INFO.: | US 2000-580515 | | 20000525 (9) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1999-318528, filed on 25 May 1999, now patented, Pat. No. US 6183740 Continuation-in-part of Ser. No. US 1999-291931, filed on 13 Apr 1999, now patented, Pat. No. US 6190897 Continuation of Ser. No. US 1999-259214, filed on 1 Mar 1999, now patented, Pat. No. US 6110719 Division of Ser. No. US 1997-910798, filed on 13 Aug 1997, now patented, Pat. No. US 5876997 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | GRANTED | | |
| PRIMARY EXAMINER: | Prouty, Rebecca E. | | |
| ASSISTANT EXAMINER: | Ramirez, Delia | | |
| LEGAL REPRESENTATIVE: | Fish & Richardson P.C. | | |
| NUMBER OF CLAIMS: | 40 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 3 Drawing Figure(s); 3 Drawing Page(s) | | |
| LINE COUNT: | 4885 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A purified recombinant phytase enzyme derived from Escherichia coli B. The enzyme has a molecular light of about 47.1 kilodaltons and has phytase activity. The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of phytate where desired. In particular, the phytase of the present invention can be used in foodstuffs to improve the feeding value of phytate rich ingredients.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 112 USPATFULL on STN
ACCESSION NUMBER: 2004:164973 USPATFULL
TITLE: Feedstuffs for agricultural livestock rearing comprising sorbic acid and enzymes
INVENTOR(S): Raczek, Nico N., Kelkheim, GERMANY, FEDERAL REPUBLIC OF

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2004126459 | A1 | 20040701 |
| APPLICATION INFO.: | US 2002-57533 | A1 | 20020124 (10) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | ProPat, L.L.C., 2912 Crosby Road, Charlotte, NC, 28211-2815 | | |

NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 274

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a feedstuff with a performance-increasing effect which comprises sorbic acid and at least one enzyme and/or enzyme product. The feedstuff can be employed for improving performance in agricultural livestock rearing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 112 USPATFULL on STN

ACCESSION NUMBER: 2004:126871 USPATFULL
TITLE: Novel bacterial phytases and method for producing same
INVENTOR(S): Ravot, Gilles, Nirnes, FRANCE

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004096850 | A1 | 20040520 |
| APPLICATION INFO.: | US 2003-415702 | A1 | 20030611 (10) |
| | WO 2001-FR3527 | | 20011112 |

| | NUMBER | DATE |
|-----------------------|---|----------|
| PRIORITY INFORMATION: | FR 2000-14448 | 20001110 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | Oliff & Berridge, PO Box 19928, Alexandria, VA, 22320 | |
| NUMBER OF CLAIMS: | 51 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 6 Drawing Page(s) | |
| LINE COUNT: | 1860 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention concerns novel bacterial phytases, and their respective production methods. More particularly, the invention concerns novel phytases derived from bacteria of genus Acidocella, and polynucleotides coding for said phytases. The invention also concerns vectors containing said polynucleotides, and transformed host organisms expressing said phytases in their tissues. The invention further concerns novel bacterial extracts comprising at least a phytase activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 112 USPATFULL on STN

ACCESSION NUMBER: 2004:76271 USPATFULL
TITLE: Use of food and drink as a delivery system for phytase in humans
INVENTOR(S): Beudeker, Robert Franciscus, KC Den Hoorn, NETHERLANDS

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004058049 | A1 | 20040325 |
| APPLICATION INFO.: | US 2003-250626 | A1 | 20030702 (10) |
| | WO 2002-EP438 | | 20020109 |

| | NUMBER | DATE |
|-----------------------|---|----------|
| PRIORITY INFORMATION: | EP 2001-200069 | 20010110 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE, SUITE 500, SAN DIEGO, CA, 92130-2332 | |
| NUMBER OF CLAIMS: | 10 | |
| EXEMPLARY CLAIM: | 1 | |

LINE COUNT: 206

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to the use of phytase to increase the uptake of minerals, and in particular calcium, in a diet for humans. Advantageously milk is used as the delivery system for phytase for human consumption.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 15 OF 112 FROSTI COPYRIGHT 2005 LFRA on STN

ACCESSION NUMBER: 657068 FROSTI

TITLE: Phytase activity of *Lactobacillus plantarum* strains from fufu-fermented cassava.

AUTHOR: Afolabi O.R.; Popoola T.O.S.

SOURCE: Tropical Science, 2004, 44 (4), 184-186 (15 ref.)

Published by: <http://www.whurr.co.uk>

ISSN: 0041-3291

DOCUMENT TYPE: Journal

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Phytic acid reduces the bioavailability of mineral elements and needs to be removed from seeds such as soya bean and wheat before consumption. **Phytases** hydrolyse phytic acid, and **phytase** activity has been found in some moulds, yeasts, and **bacteria**. This study examined the **phytase** activity of *Lactobacillus plantarum* isolated from fermenting cassava roots in the production of fufu, a traditional semi-solid food. The *Lactobacillus plantarum* strains obtained from fufu all showed **phytase** activity. Conditions for optimum production of the enzyme were determined.

L5 ANSWER 18 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 2003:435064 CAPLUS

DOCUMENT NUMBER: 139:2890

TITLE: Production, expression and sequence of modified recombinant *Escherichia coli* phytase with enhanced thermostability and proteolytic resistance for use in foodstuffs

INVENTOR(S): Short, Jay M.; Kretz, Keith; Gray, Kevin A.; Barton, Nelson R.; Garrett, James B.; O'Donoghue, Eileen; Mathur, Eric J.

PATENT ASSIGNEE(S): Diversa Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 113 pp., Cont.-in-part of U.S. Ser. No. 866,379.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| US 2003103958 | A1 | 20030605 | US 2002-156660 | 20020524 |
| US 5876997 | A | 19990302 | US 1997-910798 | 19970813 |
| US 6110719 | A | 20000829 | US 1999-259214 | 19990301 |
| US 6190897 | B1 | 20010220 | US 1999-291931 | 19990413 |
| US 6183740 | B1 | 20010206 | US 1999-318528 | 19990525 |
| US 6720014 | B1 | 20040413 | US 2000-580515 | 20000525 |
| US 2002136754 | A1 | 20020926 | US 2001-866379 | 20010524 |
| US 6855365 | B2 | 20050215 | | |

PRIORITY APPLN. INFO.:
US 1997-910798 A3 19970813
US 1999-259214 A1 19990301
US 1999-291931 A2 19990413
US 1999-318528 A2 19990525

US 2000-580515 A2 20000525
US 2001-866379 A2 20010524

AB The invention provides isolated and recombinant phytase enzymes. In one aspect, the phytase is produced by modification of the wild type gene appA of Escherichia coli by using gene site-saturation mutagenesis. The nucleotide sequence and the encoded amino acid sequence of the modified E. coli phytase are disclosed. The enzyme has phytase activity and improved thermal tolerance as compared with the wild-type enzyme. In addition, the enzyme has improved protease stability at low pH. Glycosylation of the modified phytase provided a further improved enzyme having improved thermal tolerance and protease stability. The enzyme of the invention can be produced from recombinant host cells, namely E. coli, Pichia pastoris and Schizosaccharomyces pombe. The phytases of the invention can be used to aid in the digestion of phytate where desired. In particular, the phytases of the invention can be used in foodstuffs to improve the feeding value of phytate rich ingredients. Also provided are methods for obtaining a variant polynucleotide encoding a phytase and for obtaining a phytase with enhanced thermostability or thermotolerance at high or low temps.

L5 ANSWER 22 OF 112 USPTAFULL on STN

ACCESSION NUMBER: 2003:225868 USPTAFULL

TITLE: Phytase from bacillus subtilis, gene encoding said phytase, method for its production and use

INVENTOR(S): Apajalahti, Juha, Kantvik, FINLAND
Heikkinen, Pekka, Kantvik, FINLAND
Kerovuo, Janne, Kantvik, FINLAND
Lauraeus, Marko, Kantvik, FINLAND
Morgan, Andrew, Marlborough, UNITED KINGDOM
Nurminen, Paivi, Kantvik, FINLAND
Siikanen, Osmo, Kantvik, FINLAND

PATENT ASSIGNEE(S): Finnfeeds International Ltd. (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2003157680 | A1 | 20030821 |
| | US 6638746 | B2 | 20031028 |
| APPLICATION INFO.: | US 2002-251503 | A1 | 20020920 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2000-242499, filed on 10 Jan 2000, PENDING | | |

| | NUMBER | DATE |
|-----------------------|---|----------|
| PRIORITY INFORMATION: | GB 1996-16957 | 19960813 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | FITCH EVEN TABIN AND FLANNERY, 120 SOUTH LA SALLE STREET, SUITE 1600, CHICAGO, IL, 60603-3406 | |
| NUMBER OF CLAIMS: | 11 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 12 Drawing Page(s) | |
| LINE COUNT: | 966 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to phytase, nucleic acids encoding phytase as well as methods for the production of phytase and its use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 24 OF 112 USPTAFULL on STN

ACCESSION NUMBER: 2003:219339 USPTAFULL

TITLE: Multi component controlled release system for oral care, food products, nutraceutical, and beverages

INVENTOR(S): Shefer, Adi, East Brunswick, NJ, UNITED STATES
Shefer, Samuel David, East Brunswick, NJ, UNITED STATES

| | NUMBER | KIND | DATE |
|--|--|------|---------------|
| PATENT INFORMATION: | US 2003152629 | A1 | 20030814 |
| | US 6887493 | B2 | 20050503 |
| APPLICATION INFO.: | US 2003-387907 | A1 | 20030313 (10) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 2000-696148, filed on 25 Oct 2000, PENDING | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | Diane Dunn McKay, Mathews, Collins, Shepherd & McKay, P.A., Suite 306, 100 Thanet Circle, Princeton, NJ, 08540 | | |
| NUMBER OF CLAIMS: | 53 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 3 Drawing Page(s) | | |
| LINE COUNT: | 1762 | | |
| CAS INDEXING IS AVAILABLE FOR THIS PATENT. | | | |

AB The present invention relates to an improved controlled release system that can encapsulate different flavors, sensory markers, and active ingredients, or combinations of flavors, sensory markers and various active ingredients and release multiple active ingredients in a consecutive manner, one after the other. The controlled delivery system of the present invention is substantially free-flowing powder formed of solid hydrophobic nanospheres that are encapsulated in a moisture sensitive microspheres. The flavors, and active ingredients encapsulated in the hydrophobic nanospheres, in the water sensitive microsphere, or in both the nano and the microsphere. The flavors and active ingredients encapsulated in the nanospheres can be the same or different from those encapsulated in the microspheres. The encapsulation of different flavors or active agents in the various components of the system, such as nanospheres and microspheres, provides flavor transition (change in flavor character) during the use of the products. The controlled release system of the present invention enhances the stability and bioavailability of wide range of flavors, sensory markers, and other active ingredients, prolong their residence time in the oral cavity, control their release characteristics, and prolong the sensation of flavors and other sensory markers in the mouth to provide long lasting organoleptic perception or long lasting mouthfeel. The invention further relates oral care, food products, and beverages comprising the controlled release system of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 30 OF 112 USPATFULL on STN
 ACCESSION NUMBER: 2003:26169 USPATFULL
 TITLE: Enzymes with improved phytase activity
 INVENTOR(S): Lei, Xingen, Ithaca, NY, United States
 PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 6511699 | B1 | 20030128 |
| APPLICATION INFO.: | US 2000-540149 | | 20000331 (9) |

| | NUMBER | DATE |
|-----------------------|---------------------|---------------|
| PRIORITY INFORMATION: | US 1999-127032P | 19990331 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Monshipouri, Maryam | |
| LEGAL REPRESENTATIVE: | Nixon Peabody LLP | |
| NUMBER OF CLAIMS: | 6 | |

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 16 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 1286
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides phosphatases with improved phytase activity. The invention provides proteolytic fragments of phosphatase having improved phytase activity. A recombinant gene encoding a phosphatase fragment having improved phytase activity is also provided. The invention also includes a method of increasing the phytase activity of phosphatase by treating the phosphatase with a protease. In addition, the invention provides a new phosphatase, AppA2, having improved properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 34 OF 112 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-607980 [57] WPIDS
DOC. NO. CPI: C2003-165707
TITLE: Preparing a thermotolerant phytase for preparing animal feed or human food by expressing in a **plant** cell an expression cassette comprising a promoter operably linked to a nucleic acid molecule encoding a thermotolerant phytase.
DERWENT CLASS: B04 C06 D13 D16
INVENTOR(S): BETTS, S; LANAHAN, M B
PATENT ASSIGNEE(S): (SYGN) SYNGENTA PARTICIPATIONS AG
COUNTRY COUNT: 102
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG |
|---|------|----------|-----------|----|-----|
| WO 2003057248 | A1 | 20030717 | (200357)* | EN | 157 |
| RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW | | | | | |
| W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW | | | | | |
| US 2003170293 | A1 | 20030911 | (200367) | | |
| AU 2002364919 | A1 | 20030724 | (200421) | | |
| EP 1474165 | A1 | 20041110 | (200473) | EN | |
| R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR | | | | | |
| BR 2002015406 | A | 20041109 | (200482) | | |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---------------|----------------|-----------------|----------|
| WO 2003057248 | A1 | WO 2002-US41787 | 20021230 |
| US 2003170293 | A1 Provisional | US 2001-344476P | 20011228 |
| | | US 2002-334671 | 20021230 |
| AU 2002364919 | A1 | AU 2002-364919 | 20021230 |
| EP 1474165 | A1 | EP 2002-801222 | 20021230 |
| | | WO 2002-US41787 | 20021230 |
| BR 2002015406 | A | BR 2002-15406 | 20021230 |
| | | WO 2002-US41787 | 20021230 |

FILING DETAILS:

| PATENT NO | KIND | PATENT NO |
|---------------|-------------|---------------|
| AU 2002364919 | A1 Based on | WO 2003057248 |

feed - effect of diet, time of soaking, heat treatment, phytase activity, pH and temperature

AUTHOR: Carlson, D.; Poulsen, H. D.
CORPORATE SOURCE: Department of Animal Nutrition and Physiology,
Danish Institute of Agricultural Sciences, Research
Centre Foulum, P.O. Box 50, 8830 Tjele, Denmark.
dorthe.carlson@agrsci.dk

SOURCE: Animal Feed Science and Technology, (2003) Vol. 103,
No. 1/4, pp. 141-154. 23 ref.
Publisher: Elsevier Science B.V. Amsterdam
ISSN: 0377-8401

PUB. COUNTRY: Netherlands Antilles
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20030307
Last Updated on STN: 20030307

AB An in vitro trial was performed in order to study phytate degradation in fermented liquid **feed** comprising mainly barley or wheat. The influence of heat treatment, microbial counts, temperature of soaking, time of soaking, pH as well as **phytase** activity was studied. The diets were soaked and fermented with water (1:2.75) in 1-l fermentors. The temperature was held constant at 10, 20 or 38[deg]C, respectively. Samples were taken at 0, 4, 8, 12, 24, 48 and 72 h (10 and 20[deg]C) or 2, 4, 6, 8, 10, 12 and 24 h (38[deg]C). The experiment comprised of four diets based on heat-treated or non-heat-treated barley or wheat. The diets were either supplemented or not supplemented with microbial **phytase**. Between 17 and 79% of total phytate in the diets was degraded within the first 8 h of soaking when the temperature was held at 10 or 20[deg]C, with the greatest degradation rate at 20[deg]C. When the temperature was held at 38[deg]C, it took only 2 h to degrade comparable amounts. The degradation was improved when endogenous **phytase** or microbial **phytase** was available. When the soaking temperature was 20[deg]C, the endogenous **phytase** was degraded during the soaking period, whereas the microbial **phytase** remained intact over time. At 10[deg]C, the endogenous **phytase** also remained intact during the soaking and fermentation period. In heat-treated cereals, natural **phytase** activity was reduced considerably and hence the rate of phytate degradation was slower. To check the quality of fermentation the microbial counts of lactic acid **bacteria**, coliform **bacteria**, yeast and moulds were determined. The results revealed no interactions between microbial counts and phytate degradation.

L5 ANSWER 37 OF 112 CABA COPYRIGHT 2005 CABI on STN

ACCESSION NUMBER: 2003:119252 CABA
DOCUMENT NUMBER: 20033065107
TITLE: Thermo-acido-tolerant phytase production from a soil
bacterium in a medium containing rice bran and
soybean meal extract

AUTHOR: Popanich, S.; Klomsiri, C.; Dharmsthiti, S.;
Suthiluk Popanich; Chananart Klomsiri; Saovane
Dharmsthiti

CORPORATE SOURCE: Centre for Biotechnology, Institute for Research and
Development in Science and Technology, Mahidol
University, Buddhamonthon 4 Rd., Salaya,
Nakornpathom 73170, Thailand. ststds@mahidol.ac.th

SOURCE: Bioresource Technology, (2003) Vol. 87, No. 3, pp.
295-298. 13 ref.
Publisher: Elsevier Science Ltd. Oxford
ISSN: 0960-8524

PUB. COUNTRY: United Kingdom
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20030812
Last Updated on STN: 20030812

AB A **bacterial** strain capable of producing a thermo-acido-tolerant **phytase** was isolated from soil around haystacks and designated as strain PH01. The **phytase** produced was purified to homogeneity as determined by native PAGE. From SDS-PAGE, it was 30 kDa in size. The purified **phytase** was a thermo-acido-tolerant enzyme. A complex medium for the PH01 **phytase** production was developed. The medium, "PheB", was composed of 2% glucose, 0.2% CaCl₂, 0.5% NH₄NO₃, 0.05% KCl, 0.05% MgSO₄ . 7H₂O, 0.001% FeSO₄ . 7H₂O, 0.001% MnSO₄ . H₂O in rice bran plus soybean meal extract containing 3% (v/v) phosphate solution (7.3% NaHPO₄+3.2% KH₂PO₄, pH 7.2). Cultivation was done at 37 [deg]C with aeration for 48 h which produced **phytase** at 10 U/ml. Exposure of the **phytase** to 1% bile salt; i.e., taurocholate or deoxycholate, caused less than 15% reduction of activity. Potential application of PH01 **phytase** as a **feed** supplement was suggested.

L5 ANSWER 41 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9

ACCESSION NUMBER: 2002:736712 CAPLUS

DOCUMENT NUMBER: 137:262206

TITLE: Recombinant **bacterial phytases** and their use for degradation of **food** phytates.

INVENTOR(S): Short, Jay M.; Kretz, Keith A.; Gray, Kevin A.; Barton, Nelson Robert; Garrett, James B.; O'Donoghue, Eileen; Mathur, Eric J.

PATENT ASSIGNEE(S): Diversa Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 62 pp., Cont.-in-part of U.S. Ser. No. 580,515.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|-------------|
| US 2002136754 | A1 | 20020926 | US 2001-866379 | 20010524 |
| US 6855365 | B2 | 20050215 | | |
| US 5876997 | A | 19990302 | US 1997-910798 | 19970813 |
| US 6110719 | A | 20000829 | US 1999-259214 | 19990301 |
| US 6190897 | B1 | 20010220 | US 1999-291931 | 19990413 |
| US 6183740 | B1 | 20010206 | US 1999-318528 | 19990525 |
| US 6720014 | B1 | 20040413 | US 2000-580515 | 20000525 |
| CA 2441666 | AA | 20021128 | CA 2002-2441666 | 20020524 |
| WO 2002095003 | A2 | 20021128 | WO 2002-US16482 | 20020524 |
| WO 2002095003 | A3 | 20040923 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2003103958 | A1 | 20030605 | US 2002-156660 | 20020524 |
| EP 1478769 | A2 | 20041124 | EP 2002-744175 | 20020524 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR | | | | |
| JP 2005505254 | T2 | 20050224 | JP 2002-592466 | 20020524 |
| US 2004091968 | A1 | 20040513 | US 2003-601319 | 20030620 |
| PRIORITY APPLN. INFO.: | | | | |
| | | | US 1997-910798 | A3 19970813 |
| | | | US 1999-259214 | A2 19990301 |
| | | | US 1999-291931 | A1 19990413 |
| | | | US 1999-318528 | A2 19990525 |

US 2000-580515 A2 20000525
US 2001-866379 A 20010524
WO 2002-US16482 W 20020524

AB A purified and modified phytase enzyme from Escherichia coli K12 appA phytase is provided. The enzyme has phytase activity and improved thermal tolerance as compared with the wild-type enzyme. In addition, the enzyme has improved protease stability at low pH. Glycosylation of the modified phytase provided a further improved enzyme having improved thermal tolerance and protease stability. The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of phytate where desired. In particular, the phytase of the present invention can be used in foods to improve the nutritional value of phytate rich ingredients.

L5 ANSWER 42 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
DUPLICATE 10

ACCESSION NUMBER: 2002-14993 BIOTECHDS

TITLE: A new polynucleotide encoding **bacterial phytase**, useful as a **feed** additive for improving utilization of inorganic phosphate; vector-mediated gene transfer, expression in host cell and DNA probe for recombinant protein production and animal feedstuff manufacture

AUTHOR: RAVOT G

PATENT ASSIGNEE: AVENTIS ANIMAL NUTRITION SA

PATENT INFO: WO 2002038774 16 May 2002

APPLICATION INFO: WO 2000-FR3527 10 Nov 2000

PRIORITY INFO: FR 2000-14448 10 Nov 2000

DOCUMENT TYPE: Patent

LANGUAGE: French

OTHER SOURCE: WPI: 2002-426952 [45]

AN 2002-14993 BIOTECHDS

AB DERWENT ABSTRACT:

NOVELTY - An isolated polynucleotide (I), encoding a **phytase** (II), which is (or comprises): (i) a sequence encoding a fully defined 554 amino acid sequence (S2) given in the specification; (ii) a sequence that hybridizes to (i); (iii) a homolog of (i) or (ii); or (iv) a fragment of (i)-(iii).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) (II) encoded by (I); (2) a chimeric gene (CG) comprising a promoter, (I) and a terminator; (3) an expression or transformation vector containing CG; (4) a host organism (O) transformed with CG; (5) an extract (E) of an Acidocella **bacterium** with at least one **phytase** activity; (6) a method (M1) for preparing (E); (7) preparation of (M2) (II) by culturing Acidocella or (O); (8) an enzymatic composition containing at least one extract of (6) or (II); (9) a **food** composition (FC) containing at least one (O), Acidocella, (E) or (II); and (10) preparation (M3) of the compositions of (9).

BIOTECHNOLOGY - Preferred Nucleic Acid: (I) is a fully defined 1665 nucleotide sequence (S1) given in the specification, that encodes (S2), and is derived from Acidocella. Preferred Vectors: These are plasmids, phages or viruses. Preferred Organisms: These are **bacteria**, fungi, yeast or viruses, especially Escherichia coli; **plant** cells or (parts of) **plants**. Preparation: **Phytase** was isolated from Acidocella cultures by sequential chromatography on Poros 20 HQ (twice, using different solutions for elution); Poros 20 HS and Superose 12 HR10/30, then the sequences of internal peptides determined. From the sequence information, degenerate primers (whose sequences are fully defined in the specification) were prepared and used to amplify a 500 nucleotide genomic fragment of Acidocella. This was used to probe genomic libraries to identify a 4 kb EcoRI fragment. A gene library of EcoRI fragments was established, tested for amplification, and inserts in positive clones sequenced to identify (S1), containing an open reading frame for (S2). Once isolated, (S1) can be cloned into usual vectors for

recombinant expression of (II).

USE - (I) is used for recombinant production of (II); its fragments are also useful, as probes and primers, for identifying and cloning related sequences. (II), and also extracts of *Acidocella* that contain it, are used as additives in **food/feed** compositions for monogastric animals, specifically pigs and poultry, particularly to improve assimilation of inorganic phosphorus, present as phytate in the **feed** (also of trace elements that are complexed to phytate), so as to reduce the need for phosphorus supplementation and the amount of phosphorus pollution from feces.

ADVANTAGE - (II) has a low optimal pH, corresponding to values encountered in the digestive tracts of animals.

EXAMPLE - *Acidocella aminolytica* ATCC 51361 was cultured on peptone-glucose medium at 30degreesC and pH 4, then the cells concentrated by centrifuging at 5000g and 4degreesC for 15 minutes. They were resuspended in formate buffer containing calcium chloride (pH 3.5), at 100 times their original concentration, and lysed in a 'Cell Disruptor' at 2.5 kbar. Centrifugation was repeated as above to recover an extract with **phytase** activity. (57 pages)

L5 ANSWER 49 OF 112 USPATFULL on STN

ACCESSION NUMBER: 2002:191616 USPATFULL

TITLE: Polypeptides controlling phytate metabolism in **plants**

INVENTOR(S): Martino-Catt, Susan J., Grimes, IA, UNITED STATES
Wang, Hongyu, Urbandale, IA, UNITED STATES
Beach, Larry R., Des Moines, IA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 2002102681 | A1 | 20020801 |
| APPLICATION INFO.: | US 2001-921232 | A1 | 20010802 (9) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-677064, filed on 29 Sep 2000, GRANTED, Pat. No. US 6291224 Division of Ser. No. US 1998-118442, filed on 17 Jul 1998, GRANTED, Pat. No. US 6197561 | | |

| | NUMBER | DATE |
|-----------------------|----------------|---------------|
| PRIORITY INFORMATION: | US 1998-85852P | 19980518 (60) |
| | US 1997-55446P | 19970811 (60) |
| | US 1997-55526P | 19970808 (60) |
| | US 1997-53944P | 19970728 (60) |
| | US 1997-53351P | 19970722 (60) |

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: PIONEER HI-BRED INTERNATIONAL INC., 7100 N.W. 62ND AVENUE, P.O. BOX 1000, JOHNSTON, IA, 50131

NUMBER OF CLAIMS: 2

EXEMPLARY CLAIM: 1

LINE COUNT: 3279

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to newly identified polynucleotides and polypeptides, variants and derivatives of same; methods for making the polynucleotides, polypeptides, variants, derivatives and antagonists. In particular the invention relates to polynucleotides and polypeptides of the phytate metabolic pathway.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 56 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 11

ACCESSION NUMBER: 2001:868658 CAPLUS

DOCUMENT NUMBER: 136:17278

TITLE: Recombinant **bacterial phytases** and

uses for improved nutritional value of
phytate-containing **foodstuffs**

INVENTOR(S): Short, Jay M.; Kretz, Keith A.; Gray, Kevin A.;
Barton, Nelson Robert; Garrett, James B.; O'Donoghue,
Eileen
PATENT ASSIGNEE(S): Diversa Corporation, USA
SOURCE: PCT Int. Appl., 170 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|-------------|
| WO 2001090333 | A2 | 20011129 | WO 2001-US17118 | 20010524 |
| WO 2001090333 | A3 | 20030123 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| US 6720014 | B1 | 20040413 | US 2000-580515 | 20000525 |
| CA 2411199 | AA | 20011129 | CA 2001-2411199 | 20010524 |
| EP 1301592 | A2 | 20030416 | EP 2001-937752 | 20010524 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| JP 2003534009 | T2 | 20031118 | JP 2001-587129 | 20010524 |
| BR 2001011124 | A | 20040225 | BR 2001-11124 | 20010524 |
| PRIORITY APPLN. INFO.: | | | US 2000-580515 | A 20000525 |
| | | | US 1997-910798 | A3 19970813 |
| | | | US 1999-259214 | A1 19990301 |
| | | | US 1999-291931 | A2 19990413 |
| | | | US 1999-318528 | A2 19990525 |
| | | | WO 2001-US17118 | W 20010524 |

AB A purified and modified phytase enzyme from Escherichia coli K12 appA phytase is provided. The modifications comprise 8 amino acid substitutions: W68E, Q84W, A95P, K97C, S168E, R180Y, N226C, and Y277D. The enzyme has phytase activity and improved thermal tolerance as compared with the wild-type enzyme. In addition, the enzyme has improved protease stability at low pH. Glycosylation of the modified phytase by recombinant expression in Schizosaccharomyces pombe provides a further improved enzyme having improved thermal tolerance and protease stability. The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of phytase where desired. In particular, the phytase of the present invention can be used in foodstuffs to improve the feeding value of phytase-rich ingredients.

L5 ANSWER 76 OF 112 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15

ACCESSION NUMBER: 2000:842290 CAPLUS

DOCUMENT NUMBER: 134:14011

TITLE: Recombinant **bacterial phytases** and
their uses for improving nutritional value of
phytate-containing **feed**

INVENTOR(S): Short, Jay M.; Kretz, Keith A.

PATENT ASSIGNEE(S): Diversa Corporation, USA

SOURCE: PCT Int. Appl., 147 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2000071728 | A1 | 20001130 | WO 2000-US14846 | 20000525 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| US 6183740 | B1 | 20010206 | US 1999-318528 | 19990525 |
| CA 2374532 | AA | 20001130 | CA 2000-2374532 | 20000525 |
| EP 1180152 | A1 | 20020220 | EP 2000-937932 | 20000525 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | |
| BR 2000010946 | A | 20020416 | BR 2000-10946 | 20000525 |
| JP 2003500057 | T2 | 20030107 | JP 2000-620105 | 20000525 |

PRIORITY APPLN. INFO.:

| | | |
|-----------------|----|----------|
| US 1999-318528 | A | 19990525 |
| US 1997-910798 | A3 | 19970813 |
| US 1999-259214 | A1 | 19990301 |
| US 1999-291931 | A2 | 19990413 |
| WO 2000-US14846 | W | 20000525 |

AB A purified recombinant phytase enzyme derived from Escherichia coli B is disclosed. The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of phytate where desired. In particular, the phytase of the present invention can be used in foodstuffs and feeds to improve the food value of phytate-rich ingredients.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 88 OF 112 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

ACCESSION NUMBER: 1998-04560 BIOTECHDS

TITLE: Bacillus subtilis recombinant phytase purification and characterization;

for use as food-additive or feed-additive

AUTHOR: Apajalahti J; Heikkinen P; Kerovuo J; Lauraeus M; Morgan A J; Nurminen P; Siikanen O

PATENT ASSIGNEE: Finnfeeds

LOCATION: Marlborough, UK.

PATENT INFO: GB 2316082 18 Feb 1998

APPLICATION INFO: GB 1996-16957 13 Aug 1996

PRIORITY INFO: GB 1996-16957 13 Aug 1996

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 1998-103592 [10]

AN 1998-04560 BIOTECHDS

AB A new Bacillus subtilis BS13 (NCIMB-40819) or Bacillus amyloliquefaciens recombinant **phytase** (protein sequence specified) with a specific activity of 20 U/mg, determined by incubating the **phytase** in a solution containing 100 mM Tris-HCL, pH 7.5, 1 mM CaCl₂ and 1.6 mM sodium phytate at 37 deg for 30 min, has a pH optimum greater than or equal to 6.5 or 7, and can function in the presence of digestive enzymes in the small intestine of animals. Also claimed is nucleic acid (DNA sequence specified) encoding the **phytase**, produced using a DNA probe, which can be contained on a vector and used to transform a **prokaryote** host cell, preferably Escherichia coli, Bacillus sp., Lactobacillus sp. or Lactococcus sp., or a eukaryote host cell, preferably Aspergillus sp., Humicola sp., Pichia sp.,

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| | ENTRY | SESSION |
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| | 1 GB96-16957/AP |
| | 1 GB96-16957/PRN |
| | 1 GB 1996-16957/APPS |
| | (GB96-16957/AP,PRN) |
| L6 | 1 GB 1996-16957/PN,APPS |

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| CA SUBSCRIBER PRICE | ENTRY | SESSION |
| | 0.00 | -2.92 |

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 6 MAY 2005 <20050506/UPLS>
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 FILE COVERS 1968 TO DATE.

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>>> STATISTIC FOR UPDATES OF PUBLICATION/PATENT KIND CODES
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<http://www.stn-international.de/stndatabases/details/inpadoc/fkd1>
 B. SORTED BY DATE:
<http://www.stn-international.de/stndatabases/details/inpadoc/fkd2>

<<<

>>> FOR CHANGES IN INPADOC ---> SEE HELP CHANGE
 (LAST UPDATED MARCH 14, 2005) <<<

>>> NEW FAMILY SDI ---> see
http://www.stn-international.de/stndatabases/details/inpadoc_fam_sdi.pdf

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Due to the fact that the US A documents derived from PCT applications do not have filing dates, there are still some problems with the US PCT entries, and it is more than likely that we will not be able to include the PCT cases from the US public from this week onwards. Approximately 10% of the US A documents will be affected. The EPO is working to alleviate this problem but it could take several weeks until these difficulties are overcome.

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